Australian Government
Department of Agriculture, Fisheries and Forestry

Research Case Study

Next generation of leaders in agriculture learn from chief climate scientists in Canberra Master Class

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Professor Barlow
PIARN Convenor

Some of Australia's most influential climate change scientists spent time sharing their knowledge and experience with 20 young researchers, farmers, consultants and policy makers in the primary industries during a Master Class in Canberra in February 2012.

Hosted by the Primary Industries Adaptation Research Network (PIARN) the Master Class focused on understanding how primary industries can adapt to expected changes in climate and the links between research, government policy and farmers.

PIARN Convenor and leading agricultural scientist Professor Snow Barlow explained the program brings Australia's future leaders in agriculture face to face with those who are making the decisions and developing the adaptation strategies now.

"We are trying to better prepare Australia's primary industries to adapt and prosper in a changing climate and this opportunity to learn from the current leaders in the field is one step in the right direction," Professor Barlow said.

"It is critical that the dialogue between policy makers, researchers and the people working in our primary industries is strong and open.

australia's farming future

"As the challenges of climate change increase, it is very important that policy makers fully understand climate change impacts on primary producers, that researchers provide the right information to guide decision making and that industry is engaged and proactive," he said.

Professor Richard Eckard addressing the PIARN Master Class

The three day Master Class program in Canberra involved presentations from leading scientists including Dr Mark Howden, Chief Research Scientist at the CSIRO, who is an international research leader in climate change, a lead author of the Intergovernmental Panel on Climate Change reports and a member of President Obama's climate change advisory panel.

Associate Professor Richard Eckard who sits on science advisory panels for the Australian, New Zealand and UK governments on climate change research in agriculture and leads research programs under the Department of Agriculture, Fisheries and Forestry's Climate Change Research Program (CCRP) into enteric methane, nitrous oxide and whole farm systems modelling of mitigation and adaptation strategies also addressed the group.

To gain an appreciation of action on the ground, the Master Class visited John Ive's property "Talaheni" (pictured below).

John and his wife Robyn run a 250 ha family farm in Murrumbateman, specialising in ultrafine wool production, Angus cattle and farm forestry.

The Ive's began measuring a range of critical environmental factors to their farming operation 30 years ago, and as a result have greatly improved their understanding of the climatic and pasture growth cycles on their property and been better able predict and manage changing seasonal conditions.

During the tour of the Ive's property, Master Class participants were given the opportunity to look at John's soil moisture monitoring sites where John explained the importance of soil moisture management in achieving environmental and production objectives. John also discussed the soil-water balance model he has developed to assist in timing pasture establishment, tree planting, grazing and saline water table management.

"We've seen a lot of change in 30 years. We experience severe dryland salinity issues when we first purchased Talaheni but through careful management of environmental conditions we've seen a steady increase in stock carrying capacity and quality improvement of all commodities despite the removal of over 25 per cent of "Talaheni" from conventional production.

"We've held many trials at Talaheni over the years looking at soil acidity and persistence of perennial pastures and have learnt to make maximum use of rainfall, maintain good groundcover and have built up our soil moisture holding capacity.

"We're now looking closely at research coming out of programs such as the Adaptation in the Southern Livestock Industries Project which is funded through the Department of Agriculture, Fisheries and Forestry (DAFF).

"Modelling based research is what we as farmers recognise and identify with and it is crucial for us to maintain productivity and profitability moving forward," Mr Ive said.

"It's a pleasure to host other farmers and researchers here at Talaheni and we will continue to share our experiences with others so that the knowledge bank grows across all agricultural areas."

The PIARN Master Class is funded by the National Climate Change Adaptation Research Facility (NCCARF).

Australia's Farming Future:

Climate Change Research Program

The Australian Government's Australia's Farming Future: Climate Change Research Program is a significant research effort aimed at providing practical solutions for our primary industries to adapt to the changing climate. The Climate Change Research Program (CCRP) has provided funding for research projects and on-farm demonstration activities under the three priority areas of reducing greenhouse gas emissions, improving soil management and research into adaptation management practices.

The CCRP has laid the vital groundwork for further research, demonstration and extension that will now occur through the Australian Government's $429 million Carbon Farming Futures Program.

For further information on the CCRP or any of the funded projects, please phone 1800 638 746 or visit www.daff.gov.au/aff.

This case study is part of a series produced by the Department of Agriculture, Fisheries and Forestry as part of the Climate Change Research Program.